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REMARKS

Claims 31-49 are pending. Claims 42-49 are newly added and are directed to preferred embodiments of the invention. Basis for the newly-added claims may be found in the specification at, for example, page 13, lines 11-16.

One aspect of applicant's invention is directed to a local interconnect that in one embodiment comprises first and second metal silicides and an intermetallic compound forming a composite structure. The intermetallic compound comprises metals from the first and second metal silicides and contains no non-metallic materials. In an embodiment described in the specification at page 13 and illustrated in Figs. 6 and 7, interconnect 37 is a composite structure that includes the intermetallic compound TiW, where the titanium comes from an underlying titanium layer 32 and the tungsten comes from metal silicide layer 34. The intermetallic compound reduces the electrical resistance of the local interconnect and increases its adhesion characteristics. See, page 13, lines 16-17.

In the Advisory Action mailed September 8, 2003 (Paper No. 26), the Examiner indicated that the Amendment After Final Rejection would not be entered. Because of the filing of the RCE on September 12, 2003, applicant has reproduced claims 31-41 as they were amended in that Amendment After Final Rejection and has assumed entry of that Amendment.

In the Advisory Action, the Examiner explained in paragraph 5 that it was her belief that the Amendment After Final Rejection did not place the claims in condition for allowance because:

With regards to applicant's argument regarding the metals in film 10 of Okamoto are not "from" the first and second metal silicides, it is noted that the claims are directed to the device and not to the [method] of making the device and that the metals from the intermetallic compound are selected from the metals of the first and second metal silicides, furthermore there is no criticality shown for the use of the metals provided by the first and second metal silicide, as it has not been shown that it will result in a significant difference of the structure.

Applicant disagrees with the assertions made by the Examiner for several reasons. As understood, the Examiner is relying on Fig. 4D of Okamoto to reject the claims. As

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described by Okamoto and shown in the figures, any "composite" structure would have to be layer 30, a ternary silicide film formed by the reaction of silicide film 4 and silicide film 8 (col. 5, lines 35-48). Film 10 is described as comprised of titanium nitride, is positioned on film 8, and serves as a barrier layer to aluminum diffusion (col. 6, lines 7-26). The TiN film is formed separately by sputtering (col. 4, lines 27-29).

Thus, the metals in film 10 are not "from" the first and second metal silicides in films 4 and 8 as recited in the claims. Rather, film 10 is separately deposited in a different process step. The Examiner continues to ignore the language "from" in the claims and equate it with "the same as." Okamoto's film 10 is not the same composition as that claimed in the claims and does not perform the same function as recited. The claimed intermetallic compound reduces the resistance of the local interconnect. Okamoto describes film 10 as a "barrier" layer. Applicant has demonstrated on the record that both the composition and structure of the claimed composite differ from Okamoto. Okamoto does not anticipate claims 31-49 as amended. Nor is there any teaching or suggestion in Okamoto to pick and choose from among several possibilities to arrive at the claimed invention. Okamoto does not render the claims obvious.

Further, there can be no anticipation where one skilled in the art would have to pick and choose from among numerous possible first and second silicide film compositions (see, e.g., col. 6, lines 52-63). Such a requirement for picking and choosing negates anticipation. *In re Arkley*, 172 USPQ 524 (CCPA 1972). For that additional reason, the rejection, to the extent it is based on anticipation, also fails.

With respect to the Examiner's comments concerning use of "from" in independent claims 31, 35, 37, and 38 and "formed by" in claim 41, to the extent that process language in a product claim distinguishes over the prior art, such language must be given the same consideration as traditional product language. *In re Luck*, 177 USPQ 523 (CCPA 1973). Independent claims 31, 35, 37, and 38 recite that the intermetallic compound comprises metals "from" the first and second silicides, and claim 41 recites that the intermetallic compound is formed by a reaction between the first and second metal silicides. Such an intermetallic compound, formed in the claimed manner, differs both in composition as well as function from Okamoto. Okamoto's film 10 is not formed

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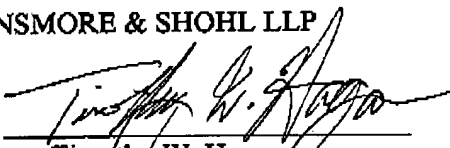
"from" first and second metal silicide films 4 and 8. Film 10, positioned atop second metal silicide film 8, differs both compositionally and functionally from the claimed composite structure.

For all of the above reasons, applicant submits that claims 31-41 as amended and newly-added claims 42-49 are patentable over the applied art of record. Early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,

DINSMORE & SHOHL LLP

By


Timothy W. Hagan

Registration No. 29,001

One Dayton Centre
One South Main Street, Suite 500
Dayton, Ohio 45402-2023
(937) 223-2050
Facsimile: (937) 223-0724
E-mail: timothy.hagan@dinslaw.com
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